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1895

MAINE

OFFICE OF STATE COMMISSIONER OF EDUCATION

A MANUAL FOR THE USE OF OFFICERS AND MEMBERS OF COUNTY TEACHERS' INSTITUTES

Class LB1753

Book .M2A3

1895

Maine. Educational Department.

Manual for the use of Officers and Members of County Teachers' Institutes

Also a plan for professional reading, suggestions on the proper use of course of study and helps in preparing for State Examinations.

State of Maine Educational Department

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This pamphlet will be sent free on application to W. W. Stetson, State Superintendent of Public Schools, Augusta, Maine.

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TO THE OFFICERS.

The Statutes provide that Teachers' Institutes, receiving State aid, shall be under the control and management of the State Superintendent of Public Schools. The practice of having the officers of the local associations decide on places for the meetings and prepare the programs for the several sessions has proved satisfactory. The Department, for obvious reasons, selects the dates when the meetings are to be held. The State Superintendent will be pleased to receive suggestions as to the time preferred in the different counties and will be governed, as far as practicable, by these recommendations.

The officers of the institutes will render a distinct service if the following matters receive attention.

The president should open the sessions at the hours announced on the program unless there are exceptional reasons for not doing so. It is important that the members understand that the exercises will close on time.

So far as practicable persons should not be allowed to enter or leave the room while speakers are addressing the institute. The officers should refrain from walking about the room or consulting with each other, or the members, while the exercises are in progress. If there is any matter that cannot wait, it is better to take a recess and attend to it, and then go on with the regular work.

Children should not be allowed to occupy the best sittings either in the assembly room or dining room, but should be asked to wait until their elders have been served. It is hoped these meetings will be object lessons in courtesy.

The president should appoint a competent person whose duty it shall be to see that no one disturbs the exercises by indulging in practices which have cast discredit upon some of our public meetings. Not the least valuable benefits derived from these gatherings are those arising from having the officers discharge the duties devolving upon them in a prompt and dignified manner. Those meetings have proved most successful in which the president has devoted his energies to presiding and the members of the executive committee have been willing to carry out his directions.

Do not give to persons titles to which they have no claim. When in doubt use Mr., Mrs. or Miss, as the case may be.

Papers should not exceed twelve minutes. The period for discussions should be limited to about thirty-five minutes.

Patrons of the school should be invited and, to a reasonable extent, urged to attend the meetings. The program should include at least one speaker who is not directly connected with school work and who looks from the standpoint of a layman at matters in which the community as well as the teaching force are vitally interested.

A special effort should be made to induce all the teachers in the county to attend, especially those who are teaching in schools where they can receive but little help from others. A little extra effort and, when possible, a personal appeal will do much toward securing this most desirable result.

The program should include a query box and at least one class exercise.

Provision should be made for singing appropriate selections at frequent intervals.

It is unwise to keep the institute waiting for any person who is assigned a part on the program. If he is not present, either fill the vacancy, or take the next number.

Arrangements should be made to have all teachers who attend the institute register and pay the treasurer ten cents. In this registration should appear the name of the teacher, her post office address and the name of the school in which she is teaching.

Entertainment should be provided only for those persons who are engaged in teaching. Programs should be sent all persons who register and pay the fee.

The Department has no funds to pay the rent of rooms in which the meetings are held. The expenses of one speaker, selected by the State Superintendent, will be paid by the State. The programs will be printed free of expense, provided the manuscripts are received about four weeks before the meeting is to be held. The Department cannot be responsible for programs printed under the direction of the officers of the institutes.

It is sincerely hoped that some officer will be responsible for having the assembly room thoroughly ventilated before the session opens, during recesses and intermissions, and at the close of each session. It is desirable that members be furnished the opportunity to observe the benefits of breathing pure air.

PROGRAMS.

In order to render the exercises more comprehensive and practical a scheme of work has been prepared embracing thirteen subjects, outlines of which are herein presented. The work outlined can be done in four annual sessions of two days each, or eight semi-annual sessions of one day, and yet give time for general work.

It is recommended that this work be done in the order in which the subjects are herein arranged and in accordance with the following method:

Have carefully prepared papers presented, covering each general subdivision of a subject. Have each paper followed by a discussion of ten minutes. After all the papers on any given subject have been read, give thirty minutes for general discussion of the whole subject.

To illustrate: The subject of arithmetic would appear in your program as follows:

ENDS TO BE SOUGHT IN TEACHING ARITHMETIC.

Paper by .....of.....
Discussion by .....of.....

MEANS TO BE USED IN TEACHING ARITHMETIC.

Paper by .....of.....
Discussion by .....of.....

METHODS OF TEACHING ARITHMETIC.

Paper by .....of.....
Discussion by .....of.....
General Discussion.

By this plan each general subject can be fully considered in a systematic and thorough way in from one and a half to two hours. If any member desires further explanation of any topic, such comment or discussion can be called out by means of the Question Box.

EDUCATIONAL THEORY.

I. DEFINITIONS:
   1. *Education:*—The harmonious development of man's physical, intellectual and moral powers.
   2. *Physical Education:*—(1) The development of physical strength and health; (2) development of bodily symmetry and grace; (3) coördination of physical and mental powers; (4) right habits of physical action.
   3. *Intellectual Education:*—(1) Orderly development of intellectual faculties; (2) training of intellectual powers to right tendencies of action; (3) forming right habits of intellectual action; (4) acquisition of knowledge.
   4. *Moral Education:*—(1) Forming definite conceptions of right conduct toward self and others; (2) training to tendency to right doing; (3) forming habits of right doing; (4) developing power of self control.

II. EDUCATIONAL ENDS:
   1. *Preparation For:*—(1) Right living in family, social and civic relations; (2) Self supporting and wealth producing activities; (3) Intelligent, orderly citizenship; (4) Rational enjoyment of life.

III. EDUCATIONAL LAWS:
   1. *Of Development of Power:*—(1) Power whether physical, intellectual or moral is developed by self activity; (2) Repeated activity develops both power and tendency; (3) Constantly repeated activities, continued long enough,

III. Educational Laws:—*Continued.*

convert tendency into habit; (4) Exercise of activities to be educative must be adapted to the status of the child's development, (*a*) in kind, (*b*) in duration and frequency; (5) Exercise of activity beyond the point of fatigue ceases to be educative.

2. *Of Acquisition of Knowledge:*—(1) The primary elements of all knowledge are acquired through the exercise of the perceptive faculties; (2) All acquisition of new knowledge must begin where knowledge in possession ends; (3) Acquisition precedes elaboration of knowledge, hence knowing precedes thinking; (4) Newly acquired knowledge must be promptly and rightly associated in memory with that in possession; (5) Knowledge to be of value must be (*a*) exact for practical use, (*b*) thorough for general intelligence, (*c*) extended for mental culture; (6) All knowledge acquired must be fixed in mind by frequent recall.

IV. Educational Means:

1. *The Instructor*:—(1) To arouse the self activity of the instructed; (2) To give systematic direction to the exercise of the pupils' activities; (3) To impart knowledge directly which the pupil needs and cannot otherwise readily acquire.
2. *Systematically Ordered Courses of Instruction:*—(1) Gymnastic for physical education; (2) Scholastic for intellectual education; (3) Ethical for moral education.
3. *Study:*—(1) Of objects of sense—observation; (2) Of books, (*a*) learning set lessons, (*b*) reading for information.
4. *Practice:*—(1) Using knowledge in getting other knowledge; (2) Using knowledge to acquire skill in using.
5. *Instruction.*—(1) Through inspiration and direction of teachers; (2) Through recitation and other school exercises.

READING.

I. Ends:

1. *Practical:*—(1) To enable the pupil to translate silently the words, signs and sentences of the written or printed page into definite ideas, thoughts and feelings.

   (2) To enable him to convey to others, vocally, the ideas, thoughts and feelings which he gets from the words, signs and sentences of the written or printed page.
2. *Educational:*—(1) To develop the knowing and thinking faculties and the feeling.

   (2) To develop and cultivate a taste for and appreciation of good literature.

   (3) To enlarge the pupil's vocabulary and increase his power of expressing thought with ease and accuracy.

II. MEANS:

1. Blackboard work, reading charts and pictures for first steps.
2. Books:—(1) For regular class drill—(2) For supplementary class reading at sight—(3) For individual silent reading, (*a*) of Fiction, (*b*) of Poetry, (*c*) of History, (*d*) of Biography, (*e*) of Travel, (*f*) Miscellaneous.
3. Rhetoricals:—Reading and Declamation exercises—(1) Of assigned selections for forming and guiding pupil's literary taste—(2) Of pupil's own selection, for testing literary taste.

III. METHODS:

1. *Primary.:*—(1) Word-phonic-sentence—blackboard, chart and book drill.
   (2) Practice reading of assigned and prepared lessons.
   (3) Special drills in enunciation, pronunciation and expression.
   (4) Alphabet taught in order of letters.
2. *Grammar:*—(1) Selected lessons from readers assigned for study with reference to definite ends.
   (2) Supplementary sight readings.
   (3) Supplementary silent reading for oral or written reproduction.
   (4) Reading of books recommended by teacher.
   (5) Vocal drills in enunciation, tone and expression.
   (6) Select readings and declamations.
3. *Advanced:*—(1) Text-book selections studied with reference to thought, feeling and mode of expression and drill in sight rendering.
   (2) Memorized selections recited and criticised.
   (3) Lives of authors studied in connection with selections read or memorized and sketches of same written.
   (4) Home reading of prescribed books—fiction, poetry, history, etc., and abstracts of same prepared.
   (5) Special drills in expression of feeling.
   (6) Select oral readings and declamations.

SPELLING.

I. ENDS:

1. *Practical:*—(1) To teach written form of all words in pupil's vocabulary.
   (2) To teach use of dictionary in determining written form and pronunciation of words.
   (3) To develop the power of ready determination at sight of the correct spelling and pronunciation of words.
   (4) To form the habit of writing words correctly.
   (5) To teach the important rules of spelling.
   (6) To excite an interest in words as to their derivation, composition, history and exact meaning.

I. Ends:—*Continued*

2. *Educational:*—(1) To train the senses of sight and hearing to quickness of action.

(2) To give exercise to the retentive memory.

(3) To exercise and strengthen the faculties of conception, judgment, and reason.

II. Means:

1. *For sources of words to be learned:*—(1) Reading books—(2) Blackboard lists of words to be studied—(3) Spelling-books and Dictionary.

2. *For use in class work:*—(1) Pencils and paper—(2) Spelling blanks—(3) Composition work—(4) Oral and written tests and drills.

III. Methods and Courses:

1. *General:*—(1) Take words to be spelled for first three grades chiefly from reading lessons, putting stress on words the pupil will use constantly and omitting those of infrequent use.

(2) See that pupil knows meaning of, and can use properly, all words learned.

(3) Use oral spelling exercises to teach, (*a*) Sound value of letters, (*b*) Syllabication, (*c*) Pronunciation.

(4) In oral spelling: (*a*) Give out words but once. (*b*) Have pupil pronounce word before spelling. (*c*) Have pupil use words in sentences of whose meaning he may be uncertain.

(5) Use written spelling to habituate pupils to right form and use of words in writing. Hence: (*a*) Dictate words as used in sentences. (*b*) Insist upon perfect legibility in writing. (*c*) Adopt some method by which pupils may rapidly mark their mistakes before leaving class. (*d*) Have pupils re-write and spell orally all mis-spelled words. (*e*) Have all words requiring it properly capitalized and hyphenated.

2. *Special—Primary Grades:*

(1) Copying words in script from daily lessons.

(2) Oral spelling of words on blackboard, chart or in open book.

(3) Memory spelling of words in lessons.

(4) Phonic word building:—(*a*) To teach eye and ear the sign and sound likenesses of words. (*b*) To develop power of readily determining pronunciation of new words.

(5) Picture spelling:—(*a*) Have children write words for things seen in pictures. (*b*) Have them write sentences using same words.

3. *Grammar Grades:*

(1) Pupils make sentences using doubtful or difficult words in lessons—(*a*) orally, (*b*) in writing.

(2) Dictation exercises of words in paragraphs assigned

III. Methods and Course:—*Continued.*

for study from school books, chiefly readers. (*a*) Teacher reads sentence clause or phrase containing word to be spelled, (*b*) Pronounces word.

(3) Oral or written exercises in spelling of words naming things observed (*a*) indoors, (*b*) outdoors.

(4) Grammatical spelling:—(*a*) of plurals; (*b*) possessives; (*c*) tense forms; (*d*) contractions and abbreviations, hyphenated words, etc.

(5) Spelling of words alike in pronunciation but differing in meaning.

(6) Stated oral and written reviews of mis-spelled words.

4. *Advanced Grades:*

(1) Oral and written drills in sight spelling of commonly mis-spelled words as found in pupils' compositions and other written work.

(2) Important rules of spelling—(*a*) For doubling final consonant. (*b*) For dropping final *e*. (*c*) For changing *y* into *i*.

(3) Spelling derivatives from given primitives.

(4) Making word lists for given suffixes, prefixes, or roots.

ARITHMETIC.

I. Ends:

1. *Practical:*—(1) Thorough, accurate and ready knowledge (*a*) of writing, reading and combining numbers—(*b*) of numbers as measures of quantity, value and ratios—(*c*) of accounts and business forms.

(2) Skill in use of numbers in business affairs.

2. *Educational:*—(1) Primary grade—development and training of sense and relational perception, of retentive and associative memory and of conception.

(2) Grammar grade—development of conception, judgment and inductive reason.

(3) Advanced grade—training of reason, inductive and deductive.

II. Means:

1. *Primary:*—Counters, blackboard, slate or paper and pencils, text-books.
2. *Grammar:*—Text-books, blackboard, slates or paper and pencils, charts for rapid work, appliances for weighing and measuring.
3. *Advanced:*—Text-books, blank books for problems and accounts, blackboard, measuring instruments.

III. Methods:

1. *Primary:*—(1) Counting, writing and reading of numbers taught together objectively and graphically.

III. Methods:—*Continued.*

(2) Combinations taught objectively, graphically and memoriter.

(3) Constant drills in writing, reading and combining to secure accuracy and rapidity.

(4) Instruction wholly oral at first—text-books used for practice work chiefly.

(5) Teaching simple written addition, substraction, etc., with use of signs, orally and by use of blackboard, with supplementary study of text-books for definitions and processes and use of same for seat practice.

(6) Objective and graphic teaching of simple fractions.

(7) All things learned to be so memorized as to be recalled with least possible mental effort.

2. *Grammar:*—(1) Text-book study preceded by oral and graphic induction of definitions and processes in notation, numeration, addition, subtraction, multiplication and division of abstract whole numbers.

(2) Same of concrete whole numbers, using quantities and values easily measured—teaching denominate numbers therewith.

(3) Similar teaching of numbers as prime and composite and of factoring and cancellation.

(4) Similar teaching of L. C. M. and G. C. D.

(5) Similar teaching of fractions, common and decimal.

(6) Same of percentage and application to simple interest.

(7) Much practice on text-book and original assigned problems at every stage of work.

(8) Constant drill in mental, oral work to induce quickness and accuracy in use of things learned.

(9) Neatness and orderly arrangement in all written work.

3. *Advanced:*—(1) Thorough topical review of denominate numbers and of common and decimal fractions with special reference to principles.

(2) Thorough text-book study of percentage—its essential nature and principles and (3) of the applications of percentage to interest, discount, profit and loss, etc.

(4) Teaching of common commercial and business forms with customs and laws governing use and (5) application of interest and discount methods to these forms.

(6) Mensuration taught by actual measurement and calculation of surfaces and solids.

(7) Ratio and simple proportion taught both by analysis and statement of problems.

(8) Oral analysis of assigned problems.

(9) Explanation of problems assigned for blackboard work made explicit and reasons given for every step.

THE SCHOOL.

I. Purposes:

1. To serve as specially organized environment to promote and direct the activities of the child's mental, moral and physical powers.
2. To serve as source and center of influence for the promotion of the intellectual, social and moral well-being of the community.

II. Agencies:

1. *As environment:*—(1) Schoolbuilding and furnishings; schoolroom, arrangement and decorations of; school surroundings.

(2) Teacher as inspiring and directing; course of study—matter and arrangement of; school organization—classification and program; the class recitations.

(3) System and method in school government tending to train to self-government and right habits of action.

(4) Systematic methods of physical training to preserve and promote health, develop strength, prevent or correct physical defects, induce grace of carriage and movement and secure facile coördination of mental and physical action.

2. *As source and center of influences:*—(1) Teacher as affecting social life of community—(*a*) by general personal character and manners; (*b*) by active interest and participation in social life; (*c*) by visiting homes of pupils.

(2) School as affecting community directly, (*a*) by inviting and securing visits from parents and friends of pupils; (*b*) by special public exercises.

(3) School Improvement League.

III. Conditions to Attainment of Ends:

1. *As environment:*—(1) Schoolbuilding must be (*a*) suitable in size and arrangement of halls and rooms; (*b*) furnished with proper means of heating and ventilation; (*c*) externally and internally attractive.

(2) Schoolroom must be, (*a*) of proper size and form, and properly lighted; (*b*) properly furnished as to seating and appliances; (*c*) decorated with pictures, etc.

(3) Teacher must be interested, interesting, sympathetic, enthusiastic, energetic, scholarly, well versed in pedagogy.

(4) Course of study must be, (*a*)practical as to subjects; (*b*) properly graded with reference to mental status of pupils; (*c*) capable of mastery in given time.

(5) School program must provide fit time and order for both preparation and recitation of lessons.

III. Conditions to Attainment of Ends:—*Continued.*

(6) Government must be, (*a*) reasonable in demands; (*b*) uniform in requirements; (*c*) just in dealing with offenses; (*d*) certain in imposition of penalties; (*e*) hearty in recognition of well doing and in encouragement of effort to do well.

2. *As influencing community:*—(1) School must enlist home interest, (*a*) through interest of children in school work; (b) by invoking parental help in children's work; (*c*) by personal contact of teachers with parents.

(2) Special public exercises of school must be of such kind and so conducted as to interest, please and command the approbation of parents and friends, (*a*) by participation in them of children from every home; (*b*) by making each child's part such as to require home preparation; (*c*) by such training that all will be perfect in their parts.

(3) The School Improvement League must (*a*) be organized of both pupils and parents; (*b*) have regular and frequent sessions; (*c*) work for the attainment of definite ends; (*d*) succeed in attaining those ends.

GEOGRAPHY.

I. Ends:

1. *Practical:*—(1) Accurate knowledge of form, size and motions of the earth and of latitude and longitude.

(2) Correct concepts of land and water forms.

(3) Knowledge of location of important land and water forms and of their relations one to another.

(4) Knowledge of climatic belts, their boundaries, characteristics, flora and fauna, etc.

(5) Correct mental pictures of continental masses with respect to important mountain and river systems.

(6) Same with respect to political divisions, their comparative size and situation with reference to each other.

(7) Knowledge of political divisions with respect to population, government, educational and religious condition of people, their industries, commercial relations, etc.

(8) Knowledge of important cities, their location, size, distinguishing characteristics, etc.

(9) Knowledge of lines and methods of intercommunication—oceanic, continental, international and interstate.

2. *Educational:*—(1) Training of associative memory.

(2) Development and training of imagination—modifying and constructive.

(3) Development and training of the faculties of conception, judgment and inductive reason.

(4) Language training.

II. Means:

1. *Primary:*—(1) Land and water features of local environment—(2) Moulding-board—(3) Pictures and maps—(4) Text-books—(5) Globe.
2. *Grammar:*—(1) Text-book—(2) Globe and outline maps—(3) Books of travel and adventure.
3. *Advanced:*—(1) Text-book—(2) Globe and maps—(3) Reference books—gazetteer, cyclopedia, etc.—(4) Books of travel.

III. Methods and Course:

1. *Primary:*—(1) Observational study and mapping of schoolroom and schoolgrounds.

   (2) Observational study of accessible land and water forms.

   (3) Pictures of land and water forms not accessible for observation.

   (4) Moulding-board representation of land and water forms observed or pictured.

   (5) Oral lessons on globe, teaching form, rotation, poles, equator, latitude and longitude.

   (6) Oral lessons on map of world teaching latitude and longitude.

   (7) Oral teaching with globe of tropics, polar circles, and zones.

   (8) Same lessons with map of the world.

   (9) Oral lessons with globe and map of the world on location, form, relative size and divisions of continents and oceans.

   (10) Moulding-board representation of continents and grand divisions.

2. *Grammar:*—(1) Text-book study over ground covered in primary oral work.

   (2) Text-book and globe study of climatic zones with reference to flora and fauna.

   (3) Special study of races of men and their distribution.

   (4) Study of continents with respect to extension, contour, mountain and river systems and climatic conditions, with progressive map drawing of same.

   (5) Special study of North America with respect to political divisions, with progressive map drawing.

   (6) Text-book and map study of United States as a whole, by sections and by states, with respect to physical features, products, industries, large cities, etc.

   (7) Text-book and map study of Maine with respect to physical features, products, industries, county divisions, leading towns and cities and lines of travel, with progressive map drawing of same.

3. *Advanced:*—(1) Review and extend, by maps and topical study, pupil's knowledge of United States with special

III. Methods and Course:—*Continued.*

respect to industries, interstate commercial relations and lines of travel, international commercial relations, exports and imports.

(2) Topical and map study of dependencies of United States with respect to location, physical and climatic conditions, peoples, products, industries, commercial relations and special governmental relations.

(3) Topical text-book and map study of South America with respect to contour, extension, elevation, drainage, climatic conditions, flora and fauna.

(4) Similar study of same with respect to political divisions, with special attention to location, comparative size, governments, population, products, industries, educational and religious conditions, commerce, capital and larger towns.

(5) Study by similar methods, physical and political geography of Europe, Asia, Africa and Oceanica.

(6) Topical study on globe or map of world, of great commercial routes, oceanic, continental and international.

(7) Study of ocean currents and winds as affecting commercial routes.

LANGUAGE AND GRAMMAR.

I. Ends:

1. *Practical:*—(1) A full vocabulary of words, chiefly Anglo-Saxon, carrying well defined and accurate meanings.

(2) Correct habits of speech.

(3) Facile and correct written expression of thought.

(4) Knowledge of word forms as modified by use in sentences and of laws governing use.

(5) Knowledge of laws governing sentential structure.

(6) Knowledge of figures of speech, their force and use.

(7) Forming of a clear, graphic style of speech, both oral and written.

2. *Educational:*—(1) Development and training of sight and sound perception.

(2) Training of memory, retentive and associative.

(3) Development and training of imagination in its modifying, constructive and creative functions.

(4) Development and training of the thought faculties of conception, judgment and reason.

II. Means:

1. *Primary:*—(1) Reading and spelling exercises—(2) Picture reading—(3) Story telling and reproduction.

2. *Grammar:*—(1) Blackboard teaching—(2) Study of text-book—(3) Compositions—(4) Analysis and parsing lessons.

II. Means:—*Continued.*

3. *Advanced:*—(1) Text-book study—(2) Analysis and parsing—(3) Compositions—(4) Study of standard authors with regard to style and its elements.

III. Methods and Course:

1. *Primary:*—(1) Putting newly learned words into sentences—(2) Drill exercises for correction of faulty habits of speech—(3) Oral description of pictures—(4) Oral reproduction of stories told by teacher—(5) Original stories told by pupils.

2. *Grammar:*—(1) Oral and blackboard teaching of parts of speech—(2) Finding and naming parts of speech in selections from reading books—(3) Parts of sentence taught in similar manner from reading books—(4) Study of parts of speech and their modifications from text-book and of rules of government and agreement—(5) Parsing and analysis—(6) Composition work in narration and description—(7) Letter writing.

3. *Advanced:*—(1) Study of text-book with special reference to rules governing (*a*) arrangement of words in sentences, (*b*) structure of sentences, (*c*) punctuation of sentences. (*d*) paragraphing.

(2) Composition work supplementary to above study, alternating with analysis and parsing.

(3) Study of figures of speech, (a) as to essential character of, (*b*) as to force of, (*c*) as to use of.

(4) Study of standard authors with reference to use of figures of speech.

(5) Composition work, (*a*) in outline, submitted for suggestions of teacher; (*b*) in full, read and criticised in class.

THE RECITATION.

I. Ends:

1. To secure study.
2. To influence the form or method of study.
3. To ascertain the results of study.
4. To give direct instruction.
5. To fix knowledge in the mind.
6. To train to clear and correct thinking.
7. To train to ready, clear and correct expression of thought.

II. Essentials:

1. Every member of the class must recite, either orally or mentally, the entire lesson.
2. Every fact in the lesson must be recited in full, accurately and in its proper connection.
3. The interest of every pupil in the class must be enlisted in, and his attention held fixed upon, the entire recitation.

III. Methods:

1. *General:*—(1) Call upon pupils to recite in no regular order.

(2) Indicate the point to be recited, before calling upon any particular pupil to recite it.

(3) Hold every pupil in the class to have made the mistakes of every other, unless he notice and correct those mistakes.

(4) If any pupil is detected failing in attention, call upon him to recite at once.

(5) Allow no books in the hands of pupils, except in reading, during the recitation and use none yourself.

(6) Have the recitation made in complete and correct sentences and, when practicable, in connected discourse.

(7) Take up all parts of the lesson in which pupils have failed, in immediate and thorough review.

(8) Make thorough work. Hence: (*a*) give short lessons; (*b*) give out lessons but once; (*c*) assign to-morrow's lesson before hearing that of to-day; (*d*) hear the recitation of the lesson before giving instruction relating to it; (*e*) make every point; (*f*) call back all new instruction given.

2. *Special:*—

(1) *The Catechetical:*

A. Of its Characteristics:—1. It assigns a certain quantity of the text-book to be memorized. 2. It ascertains the pupil's knowledge by the use of set or leading questions.

B. Of its Defects:—1. It makes the text-book the master and not the servant of teacher and pupil. 2. It leads the pupil to study rather to recite than to know. 3. Knowledge gained by it is not in its most usable form:—is fragmentary rather than classified. 4. It fails to form correct habits of investigation to be carried into after life. 5. It fails to train to habits of clear, consecutive thinking and expression of thought.

C. Of its advantages:—1. It is peculiarly adapted to classes of pupils whose reasoning powers are not fully developed—primary classes. 2. It is a powerful agent for waking up classes by bringing large numbers rapidly "under fire." 3. It trains to quickness of thought. 4. It is a potent method of ascertaining the pupil's knowledge of facts learned and recited by other methods.

D. Of its Uses:—1. It is the proper general method for primary classes. 2. It should be used for review of lessons recited by other methods.

E. Rules:—1. Use the set questions of the text-book as little as possible. 2. Guard carefully against so putting questions as to suggest the answers. 3. Have all answers

III. Methods:—*Continued.*

made in complete sentences. 4. In review lessons taught by this method, have the pupils tell as much as possible about the subject matter without questioning.

(2) *The Memoriter:*

A. Characteristics:—1. It assigns for lessons definite portion of the text-book. 2. It generally requires the lesson to be memorized verbatim. 3. It requires the recitation to be made without questions.

B. Its Defects:—1. It leads to the memorizing of words instead of ideas. 2. It confines too closely to the order and method of the text-book, and requires absolute uniformity of text-books. 3. It is a method never used in after life, in gaining knowledge.

C. Its Advantages:—1. It is an excellent means of disciplining the memory. 2. It serves to fix in the mind those formulated parts of knowledge which are the summaries of processes of reasoning and investigation.

D. Its Uses:—1. To teach rules and definitions. 2. For scripture lessons, etc., to be used in opening and general exercises. 3. For the propositions of Geometry and similar exact statements.

E. Rules:—Supplement all recitations made by this method by analysis to prevent "parroting," and by test questions to draw out the pupil's knowledge of the meaning of the lesson.

(3) *The Concert Method:*

A. Characteristics:—Same as either of preceding modes, with the addition that all the pupils recite in unison instead of individually.

B. Special Defects:—1. It gives opportunity for shirking in study. 2. It allows mere mechanical repetition without attention. 3. It is defective as a test of the pupil's knowledge of the lesson. 4. It tends to beget a drawling, unseemly habit of expression.

C. Advantages:—1. It enables the teacher to multiply his force by teaching whole classes at once. 2. It aids the diffident in giving expression to ideas—in telling what they know. 3. It helps often to wake up classes.

D. Uses:—1. In teaching rules, formulas, etc., to whole classes. 2. For drills in arithmetical work, such as rapid additions, etc.; in Geography, as map work; in vocal training, etc., and in all example teaching. 3. In infant classes in which all teaching is direct and not by study. 4. Sometimes to give variety and wake up sluggish classes.

E. Rules:—1. Guard carefully against all unnatural drawling, and mechanical forms of expression. 2. If any

III. METHODS:—*Continued.*

pupil in the class fails to take part in the recitation, call upon that pupil to recite alone.

(4) *The Topical:*

A. Characteristics:—1. It sets before the pupil definite things, about which to learn. 2. It requires him to learn them in systematic order or sequence. 3. The pupil must recite without questions, and yet not in the exact language of another.

B. Its Advantages:—1. It does not require uniformity of text-books, and saves multiplying classes. 2. It makes text-books the servants and not the masters of both teacher and pupils. 3. It imparts knowledge in classified and associated form, hence, usable knowledge. 4. It trains to consecutive, orderly thinking, and to clear, definite and ready expression of thought. 5. It forms practical habits of independent investigation to be used in after life. 6. It compels the teacher to thorough daily preparation.

C. Rules:—1. Have each member of the class provided with suitable topic-book. 2. Arrange and write on the blackboard, topic-lists as needed, and have pupils copy them into their topic-books as guides in study. 3. Assign to-day a proper number of sub-topics for a lesson; to-morrow, re-assign to-day's lesson for review, with other sub-topics as advance; so continue till the general topic is completed, thus making the last recitation one of the whole general topic. 4. At the recitation of each lesson have some pupil in the class write upon the blackboard the topic-list of the day, from which list let the recitation be made. 5. Review each general topic as a whole, requiring the class to be prepared to give both the topic-list as an analysis of the lesson, and also the subject-matter. 6. Draw out by proper questions, all necessary facts which the pupils fail to bring out in their independent recitations.

UNITED STATES HISTORY.

I. ENDS:

1. *Practical Knowledge of:*—(1) Visits of Northmen to coast of America—why failing to become generally known—possible suggestions to Columbus.

(2) European conditions leading to discovery and exploration of North America.

(3) Story of Columbus and his voyages.

(4) Other discoverers and explorers—(*a*) nationality of—(*b*) sections discovered or explored by.

(5) Condition of continent at time of discovery as regards aborigines.

1. Ends:—*Continued.*

(6) Colonization—(*a*) by Spanish, (*b*) by French, (*c*) by English, (*d*) by other nations—sections colonized by each and causes leading to.

(7) Colonial development—institutions—struggles for existence and for continental supremacy.

(8) Colonial conditions, institutions and events leading to the Revolution and conducing to its result.

(9) The Revolution—(*a*) immediate causes—(*b*) Declaration of Independence—why, when and where made—(*c*) decisive battles and campaigns—(*d*) leading American generals, orators, statesmen, etc.

(10) Conditions immediately following close of contest leading to framing and adoption of the Constitution and influence of colonial institutions on character of constitution.

(11) Events of period from adoption of constitution to war of 1812.

(12) War of 1812—(a) causes of and questions involved in—(*b*) military and naval contests in—(*c*) results.

(13) Slavery—(*a*) origin and growth as a political force—(*b*) growth of abolition sentiment in the North and effect upon the South—(*c*) claims and compromises—(*d*) war with Mexico and territory acquired—(*e*) party divisions caused by—(*f*) election of Lincoln.

(14) Civil war—beginning—cause of—decisive battles—general result.

(15) The process of reconstruction—conditions required—constitutional amendments.

(16) Development following reconstruction—in the South, in the West.

(17) Spanish-American war—causes and events leading to—contests—results.

(18) Expansion—Hawaii, Porto Rico, Philippines.

(19) The colonial policy.

(20) U. S. as a world power—in China—Monroe Doctrine—Venezuelan affairs.

(21) Development from 1800 to 1900—(*a*) territorial, (b) in population; (*c*) in agriculture; (*d*) manufacturing; (*e*) mining; (*f*) commerce, interstate and international; (*g*) inventions; (*h*) education and literature.

2. *Educational:*—(1) To train both retentive and associate memory.

(2) To train the constructive imagination, the judgment and inductive reason.

(3) To develop high ideals of heroism and civic virtue.

(4) To develop the feelings of love of and pride in country.

(5) To teach patriotism as the controling motive in citizenship and the performance of civic duty.

II. Means:

1. *Primary:*—(1) Child's knowledge (*a*) of events occurring in school, (*b*) of events occurring in community.—(2) Historical stories (*a*) of noted persons, (*b*) of important events.
2. *Grammar:*—(1) Historical stories.—(2) Elementary text-book.—(3) Historical pictures.—(4) Advanced text-book.—(5) Historical maps and charts.
3. *Advanced:*—(1) Regular and supplementary text-books.—(2) Historical maps and map drawing.—(3) Works on special history.—(4) Encyclopedia.

III. Methods and Courses:

1. *Primary:*—(1) Oral lessons in Grade IV to develop elementary historical concepts: (*a*) Conversations about school occurrences of previous years—(*b*) same about local events.

   (2) Brief stories of school and local events told orally and written by pupils.

   (3) Historical stories read or graphically told by teacher with subsequent oral or written reproduction by pupils.
2. *Grammar:*—(1) Oral lessons to develop pupils' concepts of history as a narrative of events told in order of occurrence or of mutual relation: (*a*) Conversations to draw out in order the pupils' recollections of events occurring in previous school experience—(*b*) pupils tell connected stories of what they did and what occurred in last vacation.

   (2) Teacher reads or tells in successive parts, the story of some important historical event, (e. g. the discovery of America) and pupils re-tell the successive parts as told and finally combine them in a complete story, oral or written.

   (3) Class reading of elementary text-book, with quizzes on sections read at each exercise.

   (4) Topical lessons from elementary text-book, with use of illustrative pictures and maps.

   (5) Brief course in study of local history as preparatory to study of advanced text-book.

   (6) Brief topical study in advanced text-book, of discoveries and explorations by Northmen, Spanish, English and French, using map of world to trace routes and locate sections discovered or explored.
3. *Advanced*—topical method throughout course:—(1) Review of work previously done in advanced text-book with study of causes and effects of discoveries and explorations, and construction of progressive outline map showing sections claimed by right of discovery.

III. Methods and Courses:—*Continued.*

(2) Study of first colonies planted and motives in planting in sections claimed, marking location on outline map and fixing date of each.

(3) Study of progress of colonization, especially English and French.

(4) Study of peculiar governmental, social, industrial, religious and educational characteristics of each colony of English planting, and comparison with those of France and Spain in these respects.

(5) Study of Indian, intercolonial and international wars, with special reference to effects upon progress of colonies and character of colonists.

(6) Special study of contest for continental supremacy between English and French, with incidents.

(7) Study of men prominent in colonial history.

(8) Complete outline map showing location and boundaries of English colonies, with principal cities at close of colonial period.

(9) Study of colonial conditions at outbreak of Revolution, in respect to industries, commerce, social customs, religious and educational institutions, population and wealth.

(10) Study of conditions and events serving as remote and immediate causes of Revolutionary contest.

(11) Study of Revolution with respect to (*a*) aims of colonists at beginning; (*b*) causes leading to Declaration of Independence; (*c*) Continental Congress—origin and character of; (d) military campaigns—purposes, decisive events and results of each; (*e*) naval operations—events and results; (*f*) financial provisions and operations.

(12) Study of conditions contributing to successful issue of Revolution—(*a*) in colonial history; (*b*) in character of people; (*c*) geographical; (*d*) special.

(13) Brief biographical studies of notable generals, statesmen, financiers and diplomats whose services specially contributed to successful issue of contest.

(14) Study of governmental, financial and other conditions existing at close of Revolution compelling efforts for a more perfect union resulting in the framing and adoption of the Constitution.

(15) Brief study of Washington's and Adams' administrations.

(16) Study of the political theories of Hamilton and Jefferson and their outcome in the organization of political parties.

(17) Brief study of Jefferson's administration with special regard to the Louisiana purchase as the beginning of territorial expansion.

III. Methods and Courses:—*Continued.*

(18) Study of the War of 1812 as to causes, events and results.

(19) Study of negro slavery as to (*a*) origin of; (*b*) status under constitution; (*c*) early feelings regarding its extinction, and results in northern states; (*d*) causes contributing to its extension and making it a factor in politics; (*e*) effects upon political parties and policies; (*f*) the compromise of 1820; (*g*) the Mexican War as related to and affecting slavery—brief study of events and results of; (*h*) compromise of 1850, fugitive slave law, Dred Scott Decision and Kansas-Nebraska bill; (*j*) rise of the Republican party and election of Lincoln.

(20) Study of Civil War in order of (*a*) causes—(*b*) outbreak and raising of armies—(*c*) outline of operations of first three years—giving special study to those leading to capture of Vicksburg and the battle of Gettysburg—(*d*) the Emancipation Proclamation and arming of negroes—(*e*) Grant's campaign against Richmond, Sherman's march to the sea and Sheridan's operations in Shenandoah valley —(*f*) seige and fall of Richmond—surrender of confederate armies, assassination of Lincoln.

(21) Questions settled by the war.

(22) Study of Reconstruction—(*a*) conditions of restoration of states to rights in union; (*b*) constitutional amendments, (*c*) negro suffrage and "carpet-bag" rule; (*d*) Ku-Klux disorders; (*e*) gradual elimination of negro from political power.

(22) Brief study of events during Grant's, Hayes', Garfield's, Arthur's, Cleveland's and Harrison's administrations.

(23) Study of Spanish-American war, (*a*) causes of; (*b*) events; (*c*) territory acquired; (*d*) colonial policy resulting from.

(24) Study of a century's progress from 1800 to 1900 with respect to (*a*) territorial expansion; (*b*) increase in population and wealth; (*c*) agricultural, industrial and commercial conditions; (*d*) means and modes of travel; (*e*) social conditions, education, inventions, arts and sciences.

(25) Study of lives and services of prominent statesmen, soldiers, inventors, artists, writers and educators of the century.

(26) Throughout course make constant use of other works on history, reference books, maps, charts and pictures, to give breadth, definiteness and vividness to knowledge acquired.

(27) Teach only such exact dates as mark events with which others may be associated as causes or effects or as preceding or following.

III. Methods and Courses:—*Continued.*

(28) Humanize and vitalize instruction by means of pithy stories of events and anecdotes of men, illustrating patriotism, heroism, devotion to ideals, self sacrifice, truthfulness, honesty,—all manly and civic virtues.

(29) Teach, in short, by use of such means and methods as will render knowledge gained accurate, systematic and ready, and will give the study its full educational value as a means of training the intellectual faculties, of giving force and direction to right feelings and motives, and of developing high ideals of human virtue, of patriotism and of civic duty.

NATURE STUDIES.

I. Ends:

1. *Practical:*—Accurate knowledge of physical environment as to (1) Plant life—(2) Animal life—(3) Rocks and soils—(4) Action of common physical forces.
2. *Educational:*—(1) To form habits of close, accurate observing.

(2) To give training to the senses, especially sight, hearing and touch.

(3) To develop and train the perceptive faculty, associative memory, imagination, judgment and inductive reason.

(4) To develop and train the power of facile and accurate expression of thought.

(5) To cultivate a love of nature as the expression of Divine love and wisdom.

II. Means:

1. Common field, garden and forest forms of plant life.
2. Common domestic and wild animals, birds, fishes and insects.
3. Rocks and soils of the neighborhood and illustrative specimens of same.
4. Winds, clouds, rain and snow, dew and frost, heat and cold.
5. Prepared specimens of plants and their parts; of birds, fishes and insects; of minerals, rocks and soils; some simple apparatus illustrating action of physical forces.
6. Pictures of plants, flowers, animals, birds, etc.
7. Paper and pencils, blackboard, magnifying glasses.

III. Methods and Course of Study:

1. *Primary:*—(1) General, (a) wholly observational and oral.

(*b*) Lessons adapted to seasons—e. g. lessons on germination, roots and stalks of plants in spring— (2) on leaves and flowers in summer, fruits and seeds in autumn, etc., etc.

(*c*) Material employed such as is readily accessible for observation.

III. Methods and Course of Study:—*Continued.*

(*d*) Pupils to make simple drawings of things observed.

(*e*) Pupils trained to describe things observed, fully and accurately.

(2) *Special Methods:*

(A) First Grade:—Provide for study of germination of planting corn, bean, pea, squash, in tumblers partly filled with moist cotton that pupil may observe the process day by day. Have same seeds planted in earth in shallow dishes or boxes, that plants may be taken out and examined at different stages of growth.

If possible have a school garden in which to grow plants to be studied during their entire life. Have pupils observe same plants in their home gardens.

Always have specimens of plants at hand for study during the teaching exercise.

Study plants in order of germination, roots, stalks, leaves, flowers and seeds, having likenesses and differences carefully observed and described.

Have pupils observe and describe trees growing in neighborhood with regard to likeness and difference in form of growth, stem, bark and leaves and learn to distinguish and name several at sight.

For winter work study common domestic animals—cat, dog, cow, horse—for likenesses and differences in respect to shape; tails, ears, feet, eyes, teeth, coats; ways of moving and resting; foods.

(B) Second Grade:—Review and extend work of first grade in plant study teaching likenesses and differences in roots, stems, leaves, flowers and seeds of wild plants. Compare single and double flowers and seeds borne in pods, shells and fruits. Have pupils make collections of specimen plants, leaves, flowers and seeds.

For winter work, study woods by use of specimens of oak or ash, pine or spruce and birch or maple so prepared as to show annular growth rings, cleavage and texture. Specimens should be cut smooth crosswise of grain, rough split lengthwise on two contiguous sides and smooth finished on the other two sides.

Review and extend study of animals, comparing domestic and wild, by use of pictures of latter.

(C) Third Grade:—Study cultivated and wild flowering plants for similarities and differences in stems, leaves and flowers.

In fall, study trees for modifications of form as growing in forest or field, for changes in color of foliage and shedding of foliage.

III. Methods and Course of Study:—*Continued.*

In winter, study buds of cultivated and forest trees as regards size, shape, protection.

Study also domestic and wild winter birds, for shape, size, plumage, food and for uses of former, using pictures as aids in teaching.

(D) Fourth Grade:—In spring and summer terms, study leaves for likenesses and differences in arrangement, foot stalks, form and margins. Study uses of plants as food for man and domestic animals.

In fall, study seeds as to agencies of dispersal—wind, animals, birds and man. Review previous work in study of leaves as to color and have leaves of typical colors collected and labeled by pupils, as those of oak, beech, maple and sumach.

In winter, review previous work in study of animals.

Teach by use of pictures some wild animals of same species, as cat, dog, cow, horse, etc.; classify animals taught as carnivorous, herbivorous and omnivorous.

Call attention to peculiar features in animals especially fitting them for characteristic movements, methods of procuring food, means of protection, etc. Have pupils tell brief original stories about animals.

2. *Grammar*—Fifth Grade:

(1) General:—(A) Observation of things as found in natural state and of the results of simple experiments.

(B) Generally oral supplemented by written summaries and statement of things observed.

(C) Much drawing on blackboard by teacher to illustrate lessons taught, on paper by pupils of things and parts of things studied.

(D) Connect nature and language study work by means of compositions about things studied.

(2) Special:—(A) Study and classify plants as exogens and endogens as determined by stems, leaves, and seeds.

(B) Study birds for most obvious characteristics, distinguishing them from animals previously studied; for those distinguishing one kind from another. Have children learn to know at sight or by their songs, three or more common wild birds.

(C) Begin study of rocks and soils, having pupils collect specimens and compare them for obvious distinguishing characteristics. Have children able to distinguish at sight three kinds of common rocks and two distinct soils.

(D) Study phenomena of heat and cold for sources, effects and measurements:—winds—force of, causes, direction and effects;—rain and snow—difference in and causes of.

III. Methods and Course of Study:—*Continued.*

(3) Sixth Grade:—(A) Study flowers as to arrangement—whether single, in clusters or in spikes;—as to parts—calyx, corolla, stamens and pistils;—as to uses of parts;—methods of fertilization.

(B) As part of bird study have pupils note and record time of appearance in spring of the robin, sparrow, swallow and bobolink or oriole. Have them observe and report on nesting habits, as to place of building, material used in and form of nests. Study feeding habits, as to kind of food, where and how obtained. Study differences in manner of flying, in plumage and in song. Have them able to distinguish the robin, sparrow, swallow and bobolink or oriole from one another by manner of flying, plumage or song.

(C) Study rocks as found dispersed as to differences in cleavage, fracture, hardness, shape and uses. Study ledges if accessible as to whether uniform in material, surface appearance, cleavage. Study difference between stratified and unstratified rocks and have pupils classify rocks which they have studied, under these two heads.

(D) Teach by observation or simple experiment differences between forms of matter as gaseous, liquid and solid.

By simple experiments transform matter from solid to liquid and liquid to gaseous forms, as ice to water and water to steam and lead pupils thus to the conception of heat as a force.

Teach evaporation, first by experiment, then have children observe it as effected by heat of sun.

By simple experiments teach process of condensation of vapor to water and change of water to ice. Lead pupils to infer or think out the processes by which clouds, rain and snow are produced.

(4) Seventh Grade:—(A) Teach classification of plants as annuals, biennials and perennials and have pupils make lists of known plants of each class.

Classify plants as herbs, shrubs and trees and have pupils make lists of known examples of each.

Teach classification of trees—first, as deciduous and evergreen—second, as fruit, nut, seed and cone-bearing—and have pupils make lists under each head.

(B) Review and extend study of birds, teaching facts showing their usefulness as seed carriers, insect destroyers and as food for man and animals. Teach what, why and how birds should be protected.

Begin study of insects by having pupils collect specimens of flies, moths, butterflies and beetles. Study specimens collected with regard to obvious differences and similarities in legs, wings, bodies, heads, eyes and antennae.

III. Methods and Course of Study:—*Continued.*

(C) Study rocks in regard to use and value as building materials and teach where in Maine are found granite, slate, limestone and sandstone.

Study soils as sandy, clayey, gravelly and loamy, for composition and principal elements. Study same with respect to natural products of each. Study them with respect to elements to be supplied to each to make them productive garden and farm soils.

(D) Review work of preceding grade regarding forms and changes in form of matter.

Let pupils observe and study the movements of air currents from and toward sources of heat—e. g. the stove, register or radiator by which the school room is heated. Lead pupils to apply facts observed to thinking out the nature and cause of winds.

Develop the pupil's conception of force already formed to include the idea of that which gives motion to matter.

Teach the force of gravitation by having pupils observe the fall of bodies and having them lift bodies.

Teach force of cohesion in different bodies by having pupils separate or try to separate them into fragments—e. g. a piece of clay, of wood, of lead, of iron.

Finally develop conception of force as that which changes the state of matter, imparts motion to it, or resists change in its state or position.

(5) Eighth Grade:—(A) Review study of insects in preceding grade.

Extend study—using common house fly, apple tree moth, any common butterfly, dragon fly and June beetle as types—to include facts relating to stages of development and feeding habits of each.

Study the relations of insects to plant life as beneficial or injurious.

Study their place in the economy of nature as scavengers, food for birds and animals, etc. Have pupils learn how ravages of harmful insects may be prevented.

During course of study have pupils collect and make cabinets of moths, butterflies and beetles and include in the collection the eggs, larvae and chrysalids of the apple-tree moth and several species of butterflies.

(B) Review so much of plant study as relates to trees.

Teach conditions of growth of pine, spruce, cedar and white birch.

Teach methods of conducting lumbering operations and getting lumber to mills.

Teach methods of manufacturing and transporting lumber.

Teach the uses of each kind named.

III. Methods and Course of Study:—*Continued.*

Teach the annual amount and value of the lumber products of Maine.

(C) Review study of soils.

Teach means by which soils are usually improved in fertility.

Teach effects of plowing and otherwise working soils—of subsoiling and underdraining.

Lead pupils to learn from observation, or teach them directly, what soils are naturally best for orcharding, for producing hay, corn, potatoes and for pasturage.

(D) Review work already done in physics.

Teach by means of simply constructed models of each, the parts and uses of the lever, wheel and axle, pulley, inclined plane, wedge and screw.

Teach application of the lever to the measuring of the force of gravity considered as weight.

Have pupils describe mechanical operations which they have performed or seen performed by use of some form of each or combinations of them.

PHYSIOLOGY AND HYGIENE.

I. Ends:

1. *Practical:*—(1) Such knowledge and habitual observance of the general laws of health as will serve to keep the body in full strength and vigor.

(2) Such knowledge of things and practices harmful to full bodily strength and vigor as will enable the possessor to refrain from their use and practice.

(3) Such knowledge of the construction of the body and of the functions of its parts and organs as will enable the possessor to understand and rightly apply the laws of health in daily life and to recognize and describe the symptoms of incipient attacks of disease.

(4) Such knowledge of remedial agencies and methods as will enable the possessor to meet and deal with sudden emergencies till the services of a physician can be secured.

2. *Educational:*—(1) To strengthen both retentive and associative memory; to develop and train the constructive imagination, the conceptive faculty and judgment and reason.

(2) To train to self-control of bodily appetites and passions.

(3) To form habits of cleanliness, temperance and purity.

(4) To develop in the pupil such a conception of the body as the dwelling place and servant of the soul, as will lead him to strive to make it the clean, pure and healthy home and efficient servant of a clean, pure and healthy soul.

II. Means:

1. Pupil's, knowledge of his own body as the starting point in instruction.
2. Pupil's observation, examination and study of his own body —its organs and their functions.
3. Properly graded text-books.
4. Anatomical and physiological charts, models, etc.

III. Methods and Courses of Study:

1. *General:*—(1) Oral and observational in Grades I, II and III.

(2) Oral, observational and text-book in Grades IV, V and VI.

(3) Text-book and experimental in Grades VII and VIII.

(4) Text-books with experiments and demonstrations in advanced course.

2. *Special:*—(1) First grade, teach: Position sitting and standing.

Plays conductive to growth. Teach games and train to be fair, good tempered, unselfish and courteous.

Sleep—when and how much.

What children should and should not eat and drink—tea, coffee, beer, wine and cider.

Clothing—summer and winter.

Cleanliness—care of hair, teeth, nails, clothing, etc.

Growth—helps to, as food, work, play, rest, fresh air, sunshine. Hindrances, as alcoholic drinks and tobacco.

The body as a whole: Trunk, limbs and head. Relation of correct position to a well formed body.

The Head: Parts of head and face—uses and care of—kind and loving thoughts as making attractive faces.

The Limbs: Parts of the arm—Parts, uses and care of hands. Uses and part of leg—Parts of feet—proper dress and care of feet.

The Senses: Sight—use—injury from close work and poor light. Hearing—its relation to attention—how injured. Feeling—its use. Smelling and Taste—uses of.

(2) Second Grade:

Parts of the Body: Parts used in eating, catching a ball, etc.

Wear and Repair: Cause of wear, of hunger. Material for repair.

Need of Exercise and Rest: Strength gained by play. Repair most rapid in sleep. Best time for sleep.

Cleanliness: Need of bathing often, of clean hands and face, of clean clothing. Uncleanliness of tobacco using.

Need of Food: Result of taking no food. A good breakfast, lunch, dinner. How much to eat. Why not between meals. The teeth and their care.

III. Methods and Courses of Study:—*Continued.*

The Sense of Taste. Different flavors of food. Things that blunt the sense of taste.

Table Manners: Proper use of knives, forks, spoon, napkin, etc.

The Grape and its Juice: Good use of grapes. Wrong use.

The Eye: Visible parts of the eyes and their use. Tears. Why eyes should see accurately. Care of the eyes. Danger from use of tobacco.

The Ear: Training in quick and accurate hearing. Pleasures gained through hearing. Care of the ear.

The Voice: Where the voice comes from. Why cultivate pleasant tones. Injury from shouting, screaming, bad air and tobacco smoke.

The Nose: Facts learned by smell alone. Other uses of the nose. Use of handkerchiefs. Colds from breathing impure air.

Touch: Qualities learned by the sense of touch. Helen Keller.

The Tobacco Plant: Injury to the soil from tobacco raising. Better occupations. Review injurious effects of tobacco already brought out.

Beer: Beer made from grain. Bread made from grain is healthful; beer is not, because it contains alcohol. Beer may make people stupid and sleepy.

(3) Third Grade:

Pure Air and Breathing: How air gets to the lungs—why rooms need to be ventilated.

Harmful Drinks: How soon alcohol may be formed in cider. Danger that drinking of cider, beer or wine may create desire for stronger drinks.

Food: Need of, for growth, strength, warmth. Effects of eating too much and often. Rules for eating.

Teeth and Stomach: Trace mouthful of food from plate to stomach. How food gets into blood. Care of stomach. Drinks that injure stomach.

The Heart: Motions of—pulse. Veins that can be seen.

The Blood: Blue and red blood. Blood as food carrier.

Brain and Nerves: Use. Protection. Need of food. Alcoholic drinks and tobacco as affecting action of nerves.

The Bones: Of arm, fingers, head. Relation of framework to shape of body. Care of bones. Dangers to framework of young and old. Effects of tobacco and alcoholic drinks on growth of bones.

The Muscles: How movements are made. Muscles of the arms. Difference between muscles and fat. Exercise and proper food strengthen, alcoholic drinks weaken muscle.

III. Methods and Courses of Study:—*Continued.*

Grain: Starch in. Change of starch to sugar. Sugar in sprouted grain soaked out and changed to alcohol in beer making. Difference between grain and alcohol.

Cigarettes: Harmful because containing tobacco.

The Skin and Cleanliness: The skin as a garment. Why it does not wear out. Care of.

(4) Fourth grade:

The Framework: A turtle compared with the jelly fish. Disadvantages of outside framework. Why many pieces in skeleton. Different shapes of bones. Penetrated by blood vessels. Location of principal large bones. How the joints are held together. Results of tight clothing, of ill fitting shoes.

Foods: Nature's foods for the young. Materials which furnish these. Proper choice of food. Effect of too much meat. The proper time to eat candy.

Drinks: Proper choice. Water, why needed. How fruit juices are made unhealthful. Special danger in cider and wine. Self-control in eating and drinking. Power of alcohol to weaken self-control.

Digestion: Importance of good teeth, of chewing food. Waste of saliva in chewing gum and in chewing or smoking tobacco. Swallowing. The stomach. Gastric juice. Changes in food in the stomach. Work and rest for stomach. Irritating effect of alcohol. Smoking a hindrance to digestion.

Circulation: Right and left sides of heart. Veins and arteries. How the blood feeds the body. Need of good food to make good blood. The blood as an air carrier.

Respiration: Air as a purifier. The air passages. Air sacs of the lungs. Full, deep breathing. The advantage of large lungs. Polluting air others must breathe. Airing living rooms.

Muscles: How made up. How they move bones. Sizes and shapes. Tendency of beer to fatten and weaken muscle. Fat cannot contract and relax. Why railroads require total abstinence. Why business men choose boys who do not use tobacco.

Exercise: Good forms of. In open air. Needed equally by girls.

The Brain and Nerves: Work of brain. How made strong and how rested. Spinal cord. Connection with legs, arms, etc. Alcohol benumbs brain and nerves. Effects of tobacco on ability to study, on will to do right and on success in life.

Senses: Review work of second grade with exercises for training.

III. Methods and Courses of Study:—*Continued.*

The Skin: The skin; its work. Oil and sweat glands. Danger of cooling off too quickly. Bathing as a preventive of taking cold. Clothing: proper fit, disposal of weight, protection for legs and feet.

(5) Fifth Grade:

Food: Milk and eggs the most complete foods. Need of cereal foods. The part of meat which makes muscle. Value of cheap cuts of meat. Value of vegetables and fruit. Sources of common foods. Best ways of cooking. Why food should be attractively served. Danger from impure ice, from drinking much very cold water.

Digestion: The two sets of teeth. The cutting and grinding teeth. Bone making food necessary for preserving the teeth. Tooth picks and tooth brushes. Dentist's care. Flow of saliva. Forming taste for good foods in childhood. Water the best drink. Water sipped while chewing hinders digestion. The epiglottis. The soft palate. The esophagus. The intestines and intestinal juice. The villi of the intestine; their blood vessels and other tubes. The lacteals and fatty food. Passage of other food into blood vessels. Sugar stored in the liver. How food is used by the muscles and other organs.

Alcoholic drinks, tobacco and other narcotics: The cause of decay. Work of molds and alcoholic ferments. Fermentation changes character of substances. Sugar a food; alcohol a poison. Definition of a poison. Use of yeast in breadmaking. Alcohol driven out in baking. Nature of a narcotic. The poison in tobacco. Danger of soothing syrups.

The Blood: Appearance of blood under microscope. The three parts. Work of serum, red corpuscles, white corpuscles. Clotting. Good blood necessary for strength of body and power of mind. Blood vessels. Capillaries. Distribution of food and removal of waste. Meaning of circulation. Relation of good food, pure air and exercise to good blood.

The Heart: Auricles. Ventricles. Valves. Number of beats per minute. The pulse. Strengthening the heart by exercise. Effect on the heart of fright; of alcoholic drinks and tobacco.

Respiration: Need of air in the blood. Where the blood comes in contact with the air. Why we should breath through the nose. "Adam's apple." Movements in swallowing. Branching of windpipe. Elasticity of lungs. Change of air in air-sacs. Why air once breathed is unfit to be re-breathed. Development of the lungs by deep breathing, by "forced respiration," by exercise.

(6) Sixth Grade:

III. Methods and Courses of Study:—*Continued.*

Execretion: Skin as protection. Varying thickness of outer layer. Causes of callouses and corns. Skin aids removal of waste. Sweat glands. Deposits left on skin in perspiration. Consequent need of bathing. Use of oil in skin. Alcohol enlarges capillaries of skin. Formation of hair and nails; use and care. Why the hair needs frequent washing. Proper time for bathing. Cleanliness of underclothing, of bedding. Need of waste matter being promptly expelled. The kidneys: shape, location, blood supply; their work; how overworked; how kept in good order.

Body Heat. Relation of clothing to body heat. Source of body heat. Oxygen and burning. Fuel foods. Regulation of heat by skin. Effect of exercise on warmth. Effects of alcohol.

Seeing: Pleasures derived from it. Shape of eye. Bony socket and cushion of fat. Iris. Uncleanliness and "sore eyes." Touching eyes with soiled fingers. Danger from public wash-basins and towels.

Hearing: Outer parts of ear. Hearing part. Ear drum, bones and canals. Ear wax. Danger from blows. Protection from draughts and strong wind, especially when riding. Effects of working in constant noise. Unnecessary noise and disagreeable tones in speaking.

Smell: Where the sense is located. Nerves of smell. Dependence of animals upon smell. Connection with taste. How affected by colds. Detection of foul air.

Taste: Papillae of tongue. Nerves of taste. By what affected. How taste may be dulled. What taste guards.

Touch: Nerves in skin. Where touch is most delicate. Dependence upon touch in loss of sight. Why delicacy of touch is desirable. Alcoholic drinks blunt the senses and deceive the mind.

The Nervous System: The brain as a receiver and director of messages. Cerebellum and motion. Cerebrum, the organ of thought. Relation of attention and clear thinking to efficiency of brain. Importance of rest and sleep. Alcohol and tobacco weaken power to think, to recognize warnings of the senses and to take proper precautions against danger.

The Framework: Source of hardness of bone. The jelly-like part. Marrow. Blood in bones. Soft bones of children. Joints. Hinge and ball and socket joints. Support and protection furnished by bones. What the ribs protect. The skull. The framework of animals compared with that of man.

III. Methods and Courses of Study:—*Continued.*

How the Body Moves: Lean Meat. Bundles of fibers. The power to contract and relax. Fastening of muscles to bones. Cords and tendons. Use and proper food necessary to size and strength. Proper time for exercise. Beer, wine and cider tend to lessen precision of muscle.

(7) Seventh Grade:

Plant Physiology: Sprouting and growth. Necessary conditions. Food stored in seed. Plant respiration, oxidation and work. Parts, structure, organs. The seed. Plant digestion.

Plant and Human Physiology Compared: Organs of protection and digestion. Cells. Tissues. Organs. Systerms. Health of the cells.

The Nervous System: Harmonious action of organs. Brain the central controlling organ. Co-operation of nerves, spinal cord and ganglia. The sympathetic nervous system. Reflex action. Habit.

Narcotics: Conditions necessary for alcoholic fermentation. Distilled liquors, compared with fermented. Dangers of moderate use.

Nutrition: The energy of food. Albumen, sources and determination of by experiments. Food materials in cereals, vegetables and meat. Experimental determination. Menus. Principles of selection of food.

The Digestive System: The alimentary canal. Parts, structure and processes. Grands and digestive properties of their secretions.

Hygiene of Digestion: Cooking. Vegetarian diet. Necessity for water. Sources of water supply. Mineral waters. Non-alcoholic, refreshing drinks. Nourishing drinks, when to be taken. Objections to tea and coffee.

Alcoholic Drinks: Classification of alcohol. Why with poisons. Why not with foods. Alcoholic drinks and digestion.

Domestic Economy: Apportionment of necessary expenses on income of $500 to $1,000 per year. Food for family of five on $10 per month. Dietaries on basis of $25 and $30 per month for food. Typical menus for each meal. Problems.

(8) Eighth Grade:

Circulation: Valves and nerve supply of heart. Differences in structure of right and left sides. Valves in veins. Inferior and superior vena cava. Gains and losses of the blood in circulation. Location of arteries. Wounds. Methods of checking bleeding. The lymph: its circulation; how affected by exercise. Lymph glands. Thoracic duct. Effect of exercise on tissue exchange. Massage. Change

III. Methods and Courses of Study:—*Continued.*

in structure of heart caused by beer and other alcoholic drinks. "Tobacco heart."

Respiration: Breathing organs of land and water animals. Vocal cords. Cilia. Pulmonary circulation. Respiratory movements of diaphragm and chest walls. Lung capacity; complemental, reserve, tidal and residual air. Chest and abdominal breathing. Modifications of breathing: coughing, yawning, sneezing, etc. The place of oxidation. Results of insufficient oxidation. Experimental determination of impurities of air. Effect of alcoholic drinks upon body heat, as a cause of lung diseases.

Absorption: Of fat, albumen, sugar. Storing of sugar, of fat. Use made of proteid matter. Definition of digestion, absorption, assimilation, oxidation.

Execretion: Importance, size and location of the kidneys, connection with circulation, separation of waste. Hygiene of liver and kidneys. How affected by alcoholic drinks.

The Skin: Cells of the non-living layer. Cause of their death. "Goose-flesh" and the similar process in animals. The cleansing bath. The tonic bath. General sensation, temperature and sense of position.

Muscles: Voluntary and involuntary. Work of the muscles in generating heat. The stronger the muscles, the more work and heat. Muscular system sensitive to changes in food. Alcohol decreases muscular power. How this has been proved by experience and laboratory experiments.

Framework: Vertebral column the axis of the body. Relative position of axis in man and in animals. Correspondence of leg and arm bones. Purpose of elastic cartilages in spine. The shaft, cancellous tissue, red and yellow marrow of bones.

(9) Advanced Work:

General Structure of the Body: Varieties of tissues. Properties of cells. Chemical composition. Protoplasm.

General Processes of the Body: Maintenance of life. Building material. Energy: sources, storage, liberation and use. Metabolism. Bodily organs and functions. Health and disease.

Osseous System: General arrangement. Upright position of human skelton. Composition of bone. Structure of cartilage. Dislocation. Fracture. Causes of rheumatism. Gout.

Motion: Principles of levers in bodily motion. Muscular action in walking, running and maintaining the upright posture. Structure of voluntary and involuntary muscle. Training and development.

Nutrition: Constituents of animal food. Need of organic foods. Quantity and proportion of food substances

III. Methods and Courses of Study:—*Continued.*

in diet. Object of digestion. Mucous membrane of alimentary tract. Secretion. The action of villi in absorption. Structure of liver. Use of different foods in body. Special foods or compounds needed. Essentials in a diet list. Condiments. Beverages.

Alcoholic Liquors: Source of alcohol. Nature of alcohol: its action within the body and upon bodily functions.

Circulatory System: Muscular tissue of heart; its irritatability. Systole and diastole. Contractions of auricles and ventricles. Amount of work done by heart. Lymphatic nodes. Vasomotor nerves. Danger of strain and overwork. Taking cold. Hemorrhage. Fainting. Anaemia. Germicidal power of blood. Alcohol lessens contractile power of heart, lessens ability to endure strain, weakens blood vessels. Use of tobacco a hindrance to athletic success.

Respiratory System: Membranes of lungs. Mechanism of inspiration. Affinity of haemoglobin for oxygen. Volume of air expired. Damage done by dust, alcohol, carbon dioxide. Asphyxia, drowning. Artificial respiration.

Excretory Organs: The chemical compounds of body wastes. How separated from the blood. Composition of perspiration. Amount eliminated daily. Necessity of accelerating removal of waste, by exercise, baths, drinking plenty of water, avoiding substances which irritate the kidneys. Regularity of bowels.

Nervous System: Structure of nerves: axis cylinder, central and outer sheath. Ganglion cells. White and grey matter, fissures and layers of the spinal cord and brain. Spinal nerves. Membranes and fluids of brain. Brain functions. Building and wasting of brain cells. All round development. Harm done by alcohol. The alcohol habit.

Narcotics: Nicotine and other irritant substances. Effect upon mucous membranes. Greater liability of smokers to diseases of mouth or throat. Constituents of opium. Opium habit. Effect upon moral character. Chloral and cocaine habits. Indiscriminate use of drugs.

Sensation: Localized and indefinite. Tactile corpuscles of skin. Taste-buds. Turbinated bones and rod-cells of nose. Rods and cones of retina. Hair cells of cochlea.

Voice: Structure of larynx. Vocal cords. Sounds produced by voice in speech. High pitched and nasal voices. Effect of anger and nerve tension on voice.

Fermentation and Bacteria: The redistribution of elements. The organized ferments. The splitting up of complex structures by ferments. Unorganized ferments. Bacteria. Infectious and contagious diseases.

III. Methods and Courses of Study:—*Continued.*

Disease and its Prevention: Disease germs and other causes of disease. Perfect health a preventive. Isolation, disinfection and immunity in dealing with infectious and contagious diseases.

LOCAL GEOGRAPHY AND HISTORY.

A. Geography.

I. Ends:

1. *Practical:*—(1) Thorough knowledge of town with respect to location in State and county—direction and distance from State capital and county seat—boundaries—territorial extent—surface and drainage—natural and manufactured products—soil—cultivated and forest areas.

(2) Knowledge of population—business centers—ward divisions, if a city—roads, carriage and rail.

(3) Knowledge of products, manufactured and agricultural—quantities marketed and where marketed.

(4) Knowledge of institutions in town (schools, churches, etc.)—character and location of.

2. *Educational:*—(1) Same as in general geography.

(2) To develop pride in and love for one's town.

II. Means:

1. Maps of State, county and town.
2. Travels through town.
3. Knowledge of town possessed by parents and others.
4. Special personal investigation.
5. Town records and reports.

III. Methods and Course of Study:

1. School building: Make diagram showing location of halls, dressing-rooms, closets, doors, windows, schoolrooms, platforms, teachers' desks, settees, stoves, radiators, ventilators, etc.
2. School yard: Draw plan showing boundary lines, entrances, drives, walks, location of schoolhouse, outbuildings, trees, flower beds, playgrounds, etc. Draw plan of the same as you would like to have it.
3. Town: Draw a map showing the boundaries, hills, mountains, lakes, ponds, streams. Also draw map showing villages or centers of population and business; carriage, steam and electric roads; location of public buildings; schools, and especially the pupil's own. Also draw map of pupil's own school precinct showing school building, roads leading to the same, residences, etc.
4. Draw map of city showing ward divisions, principal streets, public buildings, including schoolhouses, railroad lines and stations, electric roads, public parks, etc.

III. Methods and Course of Study:—*Continued.*

5. Physical features: Name, locate and give oral or written descriptions of mountains, lakes, ponds, rivers, bays, islands, peninsulas, etc. State size and importance of each. Describe in detail remarkable or specially notable physical features. If town is a summer resort, describe the special features which make it attractive to visitors.
6. Carriage roads in town: Number of miles of—condition of same and annual cost of keeping in repair.
7. Steam roads: Names of roads—number of miles in town—number, location and character of stations.
8. Electric roads. Number of miles in town; location of lines—places with which they connect the town.
9. Location of town in county: Direction from county seat—description of imaginary trip to county seat by usual method of travel, naming towns passed through. Direction and distance of town from State capital—method of traveling thither—important places and for what noted, on the route. Proportional part of town under cultivation—part used for grazing purposes—part in forest—part waste land—part occupied by water surfaces.
10. General fitness of soil for agriculture—differences in soil in different sections and analysis of.
11. General character of farm products. Estimated quantity of different kinds annually produced—value of same. Value of products annually sold—where marketed.
12. Number each of neat cattle, horses, sheep and swine in town last year—value of each. Leading breeds of cattle and sheep raised.
13. Character of woodlands—distribution or location in town. Estimated annual cut of fuel in cords—of timber in Ms.—value of each marketed—where marketed.
14. Name wild animals and birds found in town—characteristics and habits of those best known—those whose killing is prohibited or regulated by law.
15. Name principal wild flowers found in town—analyze best known varieties—which of them are noxious weeds.
16. Fish in lakes, streams and shore waters: Quantities of each—food varieties—kinds caught for sport chiefly—kinds marketed—kinds whose capture is regulated by law—give regulations.

B. History.

I. Ends:

1. *Practical:*—(1) Knowledge of settlement of town and of conditions and events connected therewith.

   (2) Knowledge of growth of town in population, industries, means of local travel and in educational, religious and social conditions.

I. Ends:—*Continued.*

(3) Knowledge of men prominent in history of town.

(4) Knowledge of part taken by people of town in important national affairs, civil and military.

(5) Knowledge of notable events occurring in town

2. *Educational:*—(1) Same as in study of United States History.

(2) To develop strong pride in, love for and interest in well-being of town.

II. Means:

1. Town history if any.
2. Personal recollections of older inhabitants.
3. Traditions and stories of notable events known to older inhabitants.
4. Town records and reports.

III. Methods and Course of Study:

1. Name: Give present name of town or city—former name or names—origin or meaning of the present name—if named for person, give sketch of that person.
2. Settlement: Date of first settlement—origin and circumstances of—names and character of first settlers—hardships and difficulties experienced—anecdotes and stories of. Describe early homes and home life and give stories of.
3. Early growth of settlement: First school—date of establishing—character of—sketches of early teachers—character and experiences of.
4. First church: Date of organization—denomination—first meeting-house—date of erection and description of—first settled minister—sketch of.
5. First mill or other manufactory: When, where and by whom built.
6. First road: When constructed—connecting what points—character of.
7. Incorporation: Dates of organization as plantation or incorporation as town or city. Names of first assessors—first selectmen—first mayor—sketches of same. If originally part of another town, name of such towns and date of separation.
8. Present area in square miles and acres. Greatest average length and width in miles.
9. Changes in population and valuation—tabulated by decades.
10. Changes in centers of population and business—describe.
11. First postoffice: Tell where and when established—present number and location of postoffices.
12. Important manufactures: Kind and location—when established—capital invested in—number of persons employed in—annual value of products.

III. Methods and Course:—*Continued.*

13. Farms: Number and value of those occuiped—same of those unoccupied—annual value of all farm products.
14. Other productive industries: Kind—location—number of—persons employed in—annual value of products.
15. Public schools: Number of graded and ungraded—high, location of—when established—average attendance—number of teachers—scope of instruction.
16 Number of persons of school age—annual average attendance in all public schools—annual expenditures made for public schools—amounts voted by town—received from State—derived from local funds.
17. State school lots, so called: Present condition of—if sold, for what sum—how invested—yearly income therefrom.
18. Other permanent school funds: Whence derived—how invested—income therefrom—amount of and how used.
19. Private schools: Academies, seminaries, colleges: Names of—location of each—number and description of buildings occupied—scope of instruction—number of instructors—annual attendance of students.
20. Public libraries: Name and location of—number of volumes—conditions of use by general public—by school children.
21. Churches: Number of—location of—denomination of each—number of members in each—average attendance upon services in each.
22. Societies: Social, benevolent, literary, etc. Names of—location of each—character of buildings or halls owned or occupied by each—number of members in each.
23. Other facts of importance or interest as showing the present, business, educational, moral and social condition of town.
24. Military: Early conflicts with Indians—events, incidents and stories of.
25. Colonial Wars: Part taken by town—number of persons serving in—names of persons killed or dying in—stories of.
26. Revolutionary War: Soldiers furnished for—officers serving in—number of persons killed or dying in service—local incidents and stories of.
27. War of 1812: Number of men furnished for—names of officers—number of men killed or dying in service—local events of importance or interest—hardships resulting from war—stories relating to.
28. Aroostook War: Cause of—men furnished for—results of—local incidents and stories of.
29. Mexican War: Part taken by town—men entering service—officers from town—number killed or dying in service.
30. Civil War: Number of volunteers entering service—number of men drafted for—officers entering service or made by

III. Methods and Courses of Study:—*Continued.*

promotion during service—sketch of privates and officers who won distinction—number of men and officers killed or dying in service—number who suffered in Southern prisons—local incidents and stories.

31. Spanish War: Number entering service—number killed or dying in service—anecdotes and stories.

32. Other important or interesting facts relating to military or naval history of town.

33. Biographical: List of persons born in or at any time residents of the town, who have attained distinction in literature, art, science, the legal, medical, clerical, or educational professions, business or any industrial pursuit.

34. Sketches of each, using so far as convenient the following outline:

Names of grandparents and parents, maiden name of grandmother and mother and some idea of the quality and ability of each—account of boyhood and early training of person of whom sketch is given—success attained by him—work in which he engaged—giving length of time devoted to each kind—the field in which he gained distinction—value of his services—such incidents, anecdotes and stories as will give clear ideas of the person.

35. Extended sketches of great disasters and extraordinary events occurring in town. Accounts of visits made to the town by persons of note, with statement of reasons for and incidents of such visits.

36. Titles, with names of authors of all histories, pamphlets, articles and other documents relating to the town, which have been issued.

37. Detailed outline of legends, traditions, stories and anecdotes connected with town and people who have lived in it.

38. Full sketch of odd, striking or noted characters who have lived in town.

39. Write brief statement to show how the geographical location and physical features of the town have affected its settlements, its industries, its general prosperity, its peculiar social and educational conditions; also how the same causes are likely to affect it in the future.

CIVIL GOVERNMENT.

I. Ends:

1. *Practical:*—(1) Such knowledge of the special civic rights and duties of the citizen, as will lead to the proper exercise of rights and performance of duties.

(2) Such knowledge of the organization and processes of municipal, State and National governments, as will enable the citizen to understand and justly estimate the action of those placed in charge of the several departments of each.

I. Ends:—*Continued.*

2. *Educational:*—(1) To strengthen and train the judgment and reason.

(2) To develop vivid conceptions and high ideals of right civic action in all the relations of citizenship.

II. Means:

1. The pupil's knowledge of authority, law and penalty for infraction of law, as learned in his experience of family and school government.
2. Participation in the organization and management of the School Improvement League of his school.
3. Observation of the methods of local town or city government.
4. Study of text-book.

III. Methods and Courses of Study:

1. *General:*—(1) Develop by oral instruction clear concepts of the three functions of government—the law making, the law enforcing and the penalty inflicting—by use of the pupil's own experiences of family and school government.

(2) Similarly develop clear conceptions of representative government by comparison of home or school government with that of the School Improvement League.

2. *Special:*

(1) Teach municipal government in the order of:

Plantation: How organized—corporate powers and duties—officers and their duties—qualifications of voters.

Town: How incorporated—corporate powers and duties, specially indicating those additional to those of the plantation—list of officers annually chosen—those chosen by written ballot—terms for which chosen—duties performed by each, specifying particularly those of school committee and superintendent—salaries paid each officer.

Qualifications of voter in town affairs—annual town meeting—when and how called—how opened, conducted and closed.

Make warrant containing the usual necessary articles for the town meeting—hold mock town meeting.

City: How incorporated—powers and duties other than those of town—officers and their duties—manner of election and the terms for which elected—salaries.

Wards: Ward meetings—ward officers—names of those in the pupil's own ward.

City government: Aldermen—councilmen—mayor—meeting of—methods of transacting business. Illustrate by describing the making of appropriations—make schedule of ordinary appropriations.

List of names of the principal officers of the pupil's own city—write brief sketch of present mayor.

III. Methods and Courses of Study:—*Continued.*

Classified statement of all expenditures made by the pupil's plantation, town or city for the last fiscal year as shown by annual reports.

Taxation: Poll tax—property tax—real estate tax—personal property—inventory—amount of assessment—overlay—rate of assessment, how found—any person's tax, how determined—commitment—collection, how enforced—abatements.

Municipal court—officers of—how appointed—police force—organization—how appointed.

(2) Teach State Government in the following order:

What constitutes a State? Explain the powers of the legislative, executive, judicial departments.

Under legislative department, consider Senate and House of Representatives; duties and powers of each—members and their qualifications—salaries—term of office—how laws are made.

The supreme executive power vested in what office—qualification for office—how elected and term of office—salary—duties.

Executive council composed of how many members—how elected—duties; salaries.

Superintendent of Schools is appointed by whom? term of office—duties.

Other State executive officers—how elected or appointed—terms of office—duties—salaries.

Judicial department: Supreme court—chief justice—associate justices—appointments—term of office—salaries. Superior courts—judges how appointed—term of office—salaries.

Counties as judicial districts: Shire town—county buildings—county officers—how chosen—terms of office—salaries.

County commissioner's courts—of whom consisting—powers and duties—sessions of. Probate court—officers of—powers and duties of—sessions of.

Justices of the peace—appointment of—duties—terms of office. Trial justices—duties of. Coroners—powers of.

State institutions: Location of—special purposes for which established—how managed—how supported.

State taxes: Kind of—amounts how determined—by whom collected—to whom paid.

Comparison of city and State governments for similarities and differences.

(3) Teach National government in following order:

The Nation: Of what constituted—division of powers between Nation and State—powers as regards territories.

III. Methods and Courses of Study:—*Continued.*

Congress: Two houses of—number of members in each—in what manner and for how long elected—qualifications of—salaries—officers of each house—special powers of each house—sessions of Congress, when held—comparison of Congress with State legislature.

Executive department: President and Vice President—qualifications of—in what manner and for how long elected—duties of each—salaries—vacancy in presidency how filled—compare powers and duties of President and Governor.

President's cabinet—how constituted, how appointed—duties of—compare with Governor's Council.

Executive Departments—powers and duties of each.

Judicial Department: Supreme court—how constituted—jurisdiction—officers of, how appointed—terms of office.

Courts of appeal—jurisdiction—officers—how appointed—terms of office.

Circuit Courts—jurisdiction—officers—how appointed—terms of office.

District Courts—jurisdiction—officers—how appointed—terms of office.

Court of Claims—jurisdiction—where held—officers—how appointed—terms of office.

Miscellaneous:

Amendments to constitution, how made.

Treason—in what it consists, punishment of.

Impeachment—who liable to—process of—trial—penalties.

Taxation—what taxes cannot be laid—what are imposed.

Patents and copyrights—nature of—by whom granted—to whom granted—for how long granted.

Citizenship—who are citizens—who may become citizens—process of naturalization—rights to protection of government.

TO MEMBERS.

The foregoing outlines are intended to serve a fourfold purpose. They will aid teachers in following the papers and discussions given at teachers' meetings. They will furnish a scheme for professional study, which is hoped will be found especially helpful to those who have to acquire their pedagogical knowledge without the assistance of the schools. They will serve as guides in instruction for those teachers to whom school boards leave the providing of courses of study. Finally, they will be found useful to teachers preparing to take the examination for State certificates.

It is recommended that this manual be at hand during the session of the institute and that you carefully compare the points presented in the papers and discussions with the outlines here given. In your note book

make minutes of such points as you desire to have made plainer, or upon which you wish to speak. At the proper time propose questions or participate in the discussion.

These outlines will also serve as topic lists to guide in your professional reading. It is believed that the teacher, who will guide her reading by these outlines, will find in her own experiences and in educational papers and books those pedagogical facts and principles which will prove of quite as practical value as any she could gain from other sources. If, while mastering each subject, she will intelligently use the knowledge gained in her daily teaching, she will find herself doing constantly better and more satisfactory work and growing in power as a teacher.

Teachers will find these outlines helpful as guides in selecting the subject matter to be taught in their classes.

Finally, they will afford special help to those who desire to hold State certificates. They include all the facts, except those relating to school law, which will be called for in the examinations and the teacher who has studied them carefully will come to these tests prepared to pass them successfully.

The documents enumerated in list No. 1 and issued by the State Educational Department, will be forwarded free to all persons applying for them. Teachers will find the books named in list No. 2 especially useful.

List No. 1.

Course of Study for Elementary Schools.
Schoolbuildings and Schoolyards.
A Study of Some Rural Schools.
Child Study Blank.
Study of the Things the School should do for the Child.
Some Problems of the School.
Simple Science Lessons.
Local History and Geography.
The School Improvement League.
Improvement of Schoolbuildings and Grounds.
Words, Reading and Literature and the School as it was, is and should be.
A Study of Our Public School System with Regard to Purposes, Scope of Instruction, etc.

List No. 2.

White's Elements of Pedagogy (Am. Book Co.)
Page's Theory and Practice (Am. Book Co.)
Kotchman's School Hygiene (Bardeen.)
Smith's Evolution of Dodd (Rand, McNally & Co.)
Rowe's Physical Nature of the Child (Macmillans.)
Fitch's Lectures on Teaching (E. L. Kellogg & Co.)
Hallock's Psychology and Psychic Culture (Am. Book Co.)
Hughes' Mistakes in Teaching (Am. Book Co.)
Howland's Practical Hints (Am. Book Co.)
Painter's History of Education (D. Appleton & Co.).
James' Talks for Teachers.

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